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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,478	08/29/2001	Gerald Hofer	12816-012001	5624

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EXAMINER
TSEGAYE, SABA

ART UNIT	PAPER NUMBER
2662	7

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/831,478	HOFER, GERALD	
	Examiner	Art Unit	
	Saba Tsegaye	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

2. The disclosure is objected to because of the following informalities:

Claim numbers indicated on page 4, lines 15-19, should be deleted.

The specification, on page 9, line 32 and page 10, line 15, indicates that "sequences (b) through (**g**)"; however Fig. 3 shows "sequences through (**f**)".

Appropriate correction is required.

Claim Objections

3. Claims 6-10 are objected to because of the following informalities: the use of "one pulse symbol and the number of pulse symbols" in claims 6, 8-10 in addition to " a sign bit" of claim 5, would indicate that these are two different limitations. It is not clear whether or not this is the case.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Olafsson (WO 99/12267).

Regarding claim 1, Olafsson discloses, in Figs. 1, 4 and 5, a telephone network (130) connecting a first subscriber end point (160, 204) to a second subscriber endpoint (202) by a signal transmission channel having a digital channel portion, a method of determining properties of the signal transmission channel:

sending a digital probing signal from a first subscriber terminal (170) connected to the first subscriber end point (160) to a second subscriber terminal (100), connected to the second subscriber end point (202), the digital probing signal having a sequence of probing frames, each probing frame having at least one frame portion, each frame portion having a preset number of digital symbols (fig. 5, L symbols), each digital symbol having a sign bit (B, C, D, E) and a data bit (A, -A) (page 23, lines 10-17; page 24, lines 5-10), wherein absolute digital values of the symbols in the frame portions are equal, and wherein a value of the sign bit changes with every adjacent frame portion (page, 22, lines 17-29; page 23, lines 18-25; page 24, lines 5-10),

receiving, at the second subscriber terminal, a received signal resulting from having transmitted the digital probing signal through the signal transmission channel (page 22, lines 6-16; page 35, lines 25-31);

comparing the received signal with the digital probing signal to distinguish between possible channel configurations of the signal transmission channel (page 22, lines 17-29; page 36, lines 1-6); and

transmitting a response signal from the second subscriber terminal to the first subscriber terminal, the response signal carrying information indicative of a result of comparing the received signal with the digital probing signal (page 24, line 25-31; page 36, lines 7-9).

Regarding claim 2, Olafsson discloses the method wherein sending a digital probing signal comprises setting all data bits of each symbol of a probing frame to have the same logical value (page 23, lines 10-25).

Regarding claim 3, Olafsson discloses the method wherein sending a digital probing signal comprises setting the total number of symbols of a probing frame to be greater than the number of symbols in an impulse response of a digital impairment of the signal transmission channel (page 23, line 10-page 24, line 10).

Regarding claim 4, Olafsson discloses the method wherein setting the total number of symbols of a probing frame further comprises selecting the total number of symbols per probing frame to be 80 (page 23, lines 25-31).

Regarding claims 5, 12 and 13, Olafsson discloses, in Figs, 1, 2, 4 and 5, a subscriber terminal connected to a subscriber end point of a telephone network having a plurality of subscribers, the subscriber terminal comprising:

a connection between the subscriber terminal (170) and a subscriber end point (140), the subscriber end point (140) being connected to the telephone network (130) by a digital channel portion (page 5, lines 4-14),

a probing signal transmitter for sending, to a second subscriber terminal to which a signal transmission channel has been established (page 21, line 14-page 22, line 5), a digital probing signal having a sequence of probing frames (page 22, lines 17-29), each probing frame having at least one frame portion , each frame portion having a preset number of digital symbols, each digital symbol having a sign bit and data bits, wherein the absolute digital values of the symbols in the frame portions are equal and wherein the value of the sign bit changes with every adjacent frame portion (pate 23, line 10-page 24, line 24).

Regarding claim 6, Olafsson discloses the subscriber terminal wherein one bit position of the at least one pulse symbol changes value with every other frame (page 24, lines 3-10).

Regarding claim 7, Olafsson discloses the subscriber terminal wherein the one bit position is the position of the sign bit (page 24, lines 3-10).

Regarding claim 8, Olafsson discloses the subscriber terminal wherein the number of equal symbols per frame is significantly higher than the number of pulse symbols (page 24, lines 3-10).

Regarding claims 9 and 10, Olafsson discloses the subscriber terminal wherein there is one pulse symbol per frame (page 24, lines 3-10).

Regarding claim 11, Olafsson discloses the subscriber terminal wherein the total number of symbols per frame is 80 (page 23, lines 25-31).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wang et al (US 6,660,780) discloses an apparatus and method for adapting a filter of an analog modem.

Liau et al. (US 6,574,28) discloses a method and apparatus for detecting and determining characteristics of a digital channel in a data communication system.

Marks (US 6,178,185) discloses a network interface device, for providing high bit rate access over robbed bit.

Derby et al. (US 5,822,328) discloses a frame synchronization mechanism for digital simultaneous voice/ data modems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
August 14, 2004

JOHN PEZZLO
PRIMARY EXAMINER